

formed along an external edge (13) of the stopper and a plurality of projections (20) for holding a preformed filler metal (18).

REMARKS

Claims 1-4, 6-15, 18 and 19 are pending. Claim 1 has been amended, without prejudice, to further clarify the inventive features.

Allowable Subject Matter

The allowability of claims 13-15 is hereby acknowledged with appreciation.

Status of Claim 19

This application was filed with 19 claims and product claim 19 was rejected as anticipated in the first office action. In the second office action, any reference to claim 19 was inadvertently omitted. Further consideration of the allowability of claim 19 is requested in view of the favorable action on the corresponding method claim 13-15 employing a stopper constructed in accordance with claim 19.

Claim Rejections Under 35 U.S.C. 102(b)

Claims 1-3, 6-8 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 3,496,629 to Martucci et al. (hereinafter "Martucci"). The rejection is respectfully traversed for at least the reasons which follow.

Independent claim 1, as amended, recites:

A brazing process to join two metal parts, said metal parts including (i) a tube (1) having an end (4), and (ii) a tubular metal part (3) having a lateral wall (2) with an inner wall, wherein the end (4) of said tube (3) is brazed into a hole provided in the lateral wall (2) of said tubular metal part (3), the process comprising the steps of:
positioning a brazing filler metal (5, 6) on the end (4) of said tube (3) ;
fixedly aligning the metal parts to be joined, wherein said filler metal is positioned inside said tubular metal part proximate the inner surface wall prior to melting;
heating said metal parts to a temperature at which the filler metal melts,
whereby a brazed joint is formed between the two metal parts.

As defined in claim 1, the tubular metal part (3) has a lateral wall (2) and an inner wall (See FIG. 4) and the tube (1) to be joined with the tubular metal part (3) has an end on which a brazing filler metal is positioned. As recited in claim 1, said “filler metal is positioned inside said tubular metal part (3) proximate the inner wall surface prior to melting” to thereby be in proximity to the junction of the tube and the metal part to be brazed. The subsequent “heating said metal parts” draws said filler metal “by capillary action into the clearance space in said junction once melted”. (See specification, page 7, lines 10-16)

Contrary to the reliance on Sections 102 and or 103 of the statute, Martucci neither describes the above feature of the present invention stated in claim 1 nor suggests such feature. According to Martucci, the brazing material 12 is positioned on the external side of the tube sheet 14, as shown in FIGS. 1-4. While the brazing material 12 can be received in the enlarged holes 18, it is impossible to pass through the whole length of the holes 18 to reach the inside of the tube sheet 14, at least before melting, as supported by the claim 1 of Martucci, which recites “applying heat to the brazing material until it is melted, and fills the void between the tube and tube sheet wall”. Thus, the junction formed between the tube 10 and the tube sheet 14 after heating is not inside the tube sheet 14 but on the external side of the tube sheet 14.

For at least foregoing reasons, it is respectfully submitted that independent claim 1 is patentable over Martucci. Claims 2-3, 6-8 and 18 are dependent on respectively, and contain all the limitations of, claims 1, and as such are submitted to be patentable for at least the same

reason as claim 1. Accordingly, Applicants respectfully request reconsideration and withdrawal of the outstanding claim rejections under 35 U.S.C. §102(b).

Claim Rejections Under 35 U.S.C. 103(a)

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Martucci. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Martucci in view of U.S. Patent No. 5,360,158 to Conn et al. (hereinafter “Conn”). Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Martucci in view of U.S. Patent No. 3,871,063 to Halvorsen (hereinafter “Halvorsen”). These rejections are respectfully traversed for at least the following reasons.

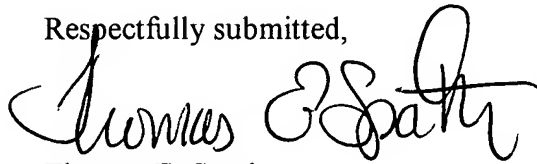
According to MPEP 2142 “[t]o establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or reference when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicant’s disclosure.” (In re Vaack, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)).

As discussed above, Martucci does not teach or suggest the above distinctive feature of claim 1, i.e. “said filler metal is positioned inside said tubular metal part proximate the inner wall surface prior to melting”. In addition, neither Conn nor Halvorsen does teach the above feature of claim 1, either. Thus, even if the teachings of Martucci, Conn and Halvorsen were combined, the resulting invention would still not teach the feature “said filler metal is positioned inside said

tubular metal part proximate the inner wall surface prior to melting". Claims 4, 10, and 12 are dependent on respectively, and contain all the limitations of, claims 1, and as such are submitted to be patentable, Applicants respectfully request reconsideration and withdrawal of the outstanding claim rejections under 35 U.S.C. 103(a).

In case of any deficiencies in fees by the filing of the present response/amendment, the Commissioner is hereby authorized to charge such deficiencies in fees to Deposit Account Number 01-0035.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Thomas E. Spath", written in a cursive style.

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